

## IN THE CLAIMS

1. A carboneous fuel containing triemethoxymethylsilane. .

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2. A carboneous fuel containing a combustion catalyst selected from the group of triemethoxymethylsilane, dimethylphosphite, ethoxytrimethylsilane, isobutyltriethoxysilane, tetramethylsilane, dimethoxy-methyl-vinyl-silane, methyltriethoxysilane, 3-aminopropyl-triethoxysilane, 3-aminopropyl-trimethoxysilane, vinyltrimethoxysilane, diethoxydi-methylsilane, dimethoxydimethylsilane, vinyltris(2-butyldenamino-oxy)silane, tetraalkyloxysilanes, tetramethoxysilane, tetraethoxysilane, tetrapropoxysilane, tetraisopropylsilane, tetraisobutylsilane, a dialkylphosphites, dimethyl-phosphite, diethylphosphite, dipropylphosphite, dibutylphosphite, di-tert-butylphosphite, trialkylphosphites, trimethylphosphite, triethylphosphite, tripropylphosphite, triisopropylphosphite, tributyl-phosphite), dimethylmethylphosphonate, diethylmethyl-phosphonate, P-pyrophosphate, trimethyl-orthoacetate, trimethylorthovalerate, trimethylorthobutyrate, trimethylortho-formate, alkyloxymethanes, tetraalkyloxymethanes, tetramethoxymethane, tetraethoxymethane, tetrapropoxymethane, tetraisopropoxymethane, tetratert-butoxy-methane, potassium pyrophosphite, trimethylorthoacetate, triethylorthoacetate, trimethylorthobutyrate, triethylortho-butyrate, trimethylorthovalerate, trimethylorthoformate, dimethoxymethane, diethoxyethane, tetramethoxymethane, triethoxymethylmethane, tri-methoxymethylmethane, tetraethoxymethane, trimethoxymethylethane, triethoxymethylethane, glacial acetic acid, acetic acid anhydride, (acetyloxy) acid acid, ethyl ester (acetyloxy) acetic acid, aminooxo acetic acid, aminooxo acetic acid hydrazide, ammonium acetate, acetoacetic acid, methoxyacetic acid, ethoxyacetic acid, methoxy ethyl ester of acetic acid, methoxy methyl ester of acetic acid, ethoxy methyl ester of acetic acid, propoxy methyl ester of acetic acid, oxoacetic acid, an alkylhydroxyesters of acetic acid, methylesterhydro-xyacetic acid, ethylesterhydroxy-acetic acid, propylesterhydro-xyacetic acid, alkyl acetates, methyl ester acetic acid, ethyl arsenate, ethyl arsenite, methyl ester of butanic acid, ethyl ester of butanic acid, 2-hydroxybutanic acid, 3-hydroxybutanic acid, 3-hydroxy-ethylester of butanic acid, 2-hydroxyethylester of butanic acid, diphenyl carbonate, dipropyl carbonate, ethylmethyl carbonate, dibutyl carbonate, tetranitromethane,

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triethylphosphine oxide, triethylphosphine oxide,  
triethylphosphine, diethyl-phosphinic acid,  
dimethylphosphinic acid, ethyl diethylphosphinic acid,  
diethylphosphonic chloride, dibutyl ester phosphonic acid,  
5 (1,1-dimethylethyl) phosphonic acid, ethenyl diethyl ester  
phosphoric acid, diethyl ethylphosphonate, ethyl  
dimethylester phosphonic acid, methyl dimethylester  
phosphonic acid, methyl monoethylester phosphonic acid,  
methyl monomethylester phosphonic acid, methyl-O,O-  
10 dimethylester phosphonothioic acid, diethyl ester phosphoric  
acid, dimethyl ester phosphoric acid, tributyl phosphate,  
ethylphosphate, trimethyl ester ester phosphoric acid,  
triethyl ester ester phosphoric acid, tripropyl phosphate,  
O,O,O,-triethyl ester phosphorothioic acid, diethylester  
15 phosphorous acid, dimethylester phosphorous acid, tributyl  
ester phosphorous acid, triphenyl ester phosphorous acid,  
O,O,S-tiethyl ester phosphorodithioic acid, 2-methyl-  
1,2,propanediol, 2-methyl-2-nitro-1,3,-propanediol, 2-  
methyl-2-propyl-1,3,-propanediol, 1-nitrate-1,2,propanediol,  
20 1,1',1'',1'''-[methanetetrayltetrakis(oxy)]-tetrakis propane,  
methyl propyl ether, isopropylmethyl ether, isobutyl methyl  
ether, ethyl propyl ether, propylmethyl ether, butyl methyl  
ether, 1,1'-[methylenebis(oxy)]bis[2-methyl-propane, 1-(1-  
methylethoxy)-propane, 2,2',2''-[methylidyne-tris(oxy)]tris  
25 propane, 1,1',1''-[methylidynetris(oxy)]tris[2-methyl  
propane, 2-methyl-1-nitro propane, 2-methyl-2-nitro propane,  
hydracrylonitrile, 1,1,1-triethoxy-propane, 1,1,3-triethoxy-  
propane, 1,1,1-trimethoxy-propane, 1,1,3-trimethoxy-propane,  
1,1,1-trifluoro-3-nitro-propane, 2-pyrrolidinone, phenol,  
30 and mixture.

3. The composition of claim 2, wherein the  
combustion catalyst is selected from group consisting of  
trimethoxymethylsilane, ethoxytrimethylsilane,  
35 isobutyltriethoxysilane, tetramethylsilane, dimethoxy-  
methyl-vinyl-silane, methyltriethoxysilane, 3-aminopropyl-  
triethoxysilane, 3-aminopropyl-trimethoxysilane,  
vinyltrimethoxysilane, diethoxydimethylsilane, di-  
methoxydimethylsilane, vinyltris(2-butylidenaminooxy)silane,  
40 tetramethoxysilane, tetraethoxysilane, tetrapropylloxysilane,  
tetraisopropylsilane, tetraisobutylsilane,  
dimethylphosphite, dipropylphosphite, diethylphosphite,  
dibutylphosphite, di-tert-butylphosphite, trialkylphosphites  
trimethylphosphite, triethylphosphite,  
45 triisopropylphosphite, tributylphosphite), dimethyl-  
methylphosphonate, diethylmethylphosphonate, potassium pry-  
phosphite, trimethylorthoacetate, triethylorthoacetate, tri-  
methylorthobutyrate, triethylorthobutyrate, tri-

methylorthovalerate, trimethylorthoformate, including homologues, analogues, isomers, derivatives, and mixture thereof.

- 5        4.            The composition of claim 3, wherein the catalyst  
is selected from group consisting of trimethoxymethylsilane,  
dimethylphosphite, diethylphosphite, tetramethoxymethane,  
10        tetraethoxymethane, trimethoxymethylmethane,  
triethoxymethylmethane, methoxy methyl ester of acetic acid,  
tetranitromethane, and mixture.
5.            The composition of claim 2, wherein said  
carbaceous fuel is a hydrocarbon fuel.
- 15        6.            The composition of claim 2, wherein said  
carbaceous fuel is an Enhanced Combustion Structure ("ECS")  
compound having a latent heat of vaporization (LHV) equal  
to or greater  $21 \text{ kJ mol}^{-1}$  at its boiling temperature, and  
a minimum burning velocity (as measured by laminar Bunsen  
20        flame) of 40 cm/sec ("BV"), C2 - C12 aldehydes, aldehydic  
acids, C2 - C12 ethers, ether acids, C3 to C15 di-ethers, C1  
- C15 alcohols, C2 - C12 oxides, C3 - C15 ketones, ketonic  
acids, C3 - C15 esters, alkyl formates, acetates,  
25        diacetates, butyrates, orthoesters, C3 - C12 diesters, C5 -  
C12 phenols, C3 - C20 glycol ethers, C2 - C12 glycols,  
glycol ethers, C3 - C20 alkyl carbonates, C3 - C20 dialkyl  
carbonates, C3 - C20 asymmetrical alkyl/dialkyl carbonates,  
C3 - C20 di-carbonates, C1 to C20 organic and inorganic  
30        peroxides, hydroperoxides, carboxylic acids, amines,  
nitrates, di-nitrates, oxalates, phenols, glacial acetic  
acids, C3 to C8 hydroxy esters of acetic acid, anhydrides,  
methoxy methyl ester of acetic acid, boric acids,  
orthoborates, hydroxyacids, orthoacids, anhydrides,  
35        acetates, acetyls, methyl esters, nitrates, di-nitrates,  
nitro-ethers, aldehydic acids, anhydrides, carbonic esters,  
carboxylic acids, esters, di-esters, ethers, di-ethers,  
formic acids, hydroxyacids, ketones, ketonic acids,  
nitrates, alkyl/cyclo/cycloalkyl/aryl nitrates,  
40        nitromethane, nitroethane, nitropropane, di-nitrates,  
amines, anilines, amides, hydrazines, nitrosyls, imides,  
methylamines, xylidine, 2,3-xylidine, ammonia,  
orthoborates, orthoesters, orthoacids, oxides, oxalates,  
oxalic acids, peroxides, hydroperoxides, and phenols, said  
45        compound optionally containing at least one substituent  
selected from alkyl, alkyloxy, dialkyl, dialkyloxy,  
polyalkyl, polyalkyloxy, aryl, amide, acetate, aldehyde,

carboethoxy, carbomethoxy, carbonyl, carbonyldioxy, carboxy, ethoxalyl, ethoxy, formyl, glycolyl, glyoxylyl, hydroxyl, imide, methoxy, or methylenedioxy, nitrosyl radical, and mixtures thereof.

- 5        7.                The composition of claim 7, wherein said ECS  
oxygenate is selected from the group consisting of methyl  
tertiary butyl ethers, ethyl tertiary butyl ether, tertiary  
methyl amyl ether, tertiary methyl ethyl ether, ethyl  
10       tertiary amyl ether, dimethyl ether, DIPE, methyl ester, C1  
to C6 aliphatic alcohols, dimethyl carbonate, diethyl  
carbonate, methylal, ethylal, and mixture.
- 15       8.                The composition of claim 2, wherein said fuel  
contains at least one non-leaded element or derivative  
organic or inorganic compound (NLEC") containing said non-  
lead element, selected from the group consisting of 1A, 2A,  
3B, 4B, 5B, 6B, 7B, 8, 1B, 2B, 3A, 4A, 5A, 6A, or 7A  
20       elements of the Periodic Chart of Elements (CAS version),  
and mixture, wherein said element or derivative compound, is  
combustible and optionally has a minimum heating value of  
4,000 Kcal/kg.
- 25       9.                The composition of claim 8, wherein said NLEC is  
a combustible element or compound containing at least one  
element selected from the group consisting of aluminum,  
boron, bromine, bismuth, beryllium, calcium, cesium,  
chromium, cobalt, copper, francium, gallium, germanium,  
iodine, iron, indium, lithium, magnesium, manganese,  
30       molybdenum, nickel, niobium, phosphorus, potassium,  
palladium, rubidium, sodium, tin, zinc, praseodymium,  
rhenium, silicon, vanadium, strontium, barium, radium,  
scandium, yttrium, lanthanum, actinium, cerium, thorium,  
titanium, zirconium, hafium, praseodymium, protactinium,  
tantalum, neodymium, uranium, tungsten, promethium,  
35       neptunium, samarium, plutonium, ruthenium, osmium, europium,  
americium, rhodium, iridium, gadolinium, curium, platinum,  
terbium, berkelium, silver, gold, dysprosium, californium,  
cadmium, mercury, holmium, titanium, erbium, thulium,  
arsenic, antimony, ytterbium, selenium, tellurium, polonium,  
40       lutetium, astatine, mixture thereof, including organic and  
inorganic derivatives.
- 45       10.              The fuel composition containing an ECS oxygenate  
selected from MTBE, ETBE, DMC, DEC, methylal, ethylal,  
methanol, ethanol, or mixture, and a compound selected from  
[2-(cyclohexenyl)ethyl]triethoxysilane, cyclohexenyl

dimethoxymethylsilane, benzyltrimethylsilane, N-(3-  
 (trimethoxysilyl)propyl)ethylenediamine, N-1-(3-  
 (trimethoxysilyl)propyl)diethylenetriamine, N-(3-  
 (trimethoxysilyl)propyl)ethylenediamine, 1-(trimethyl(silyl-  
 5 )pyrrolidine, triphenylsilanol, octamethyltrisiloxane,  
 2,2,4,4,6,6-hexamethylcyclotrisilazane,  
 hexamethylcyclotrisiloxane, hexamethyldisilane, 1,1,1,3,3,3-  
 hexamethyl disilazane, hexamethyldisiloxane,  
 hexamethyldisilthiane, allyltributylsilane,  
 10 tetraalkylsilanes (e.g. tetraethylsilane, tetrabutylsilane,  
 etc.), 3-aminopropyltriethoxysilane, benzytrimethylsilane,  
 benzytriethylsilane, N-benzyltrimethylsilylamine, diphenyl-  
 silanediol, dihexylsilanediol,  
 (trimethylsilyl)cyclopentadiene, potassium methoxide,  
 15 potassium ethoxide, potassium propoxide, potassium  
 isopropoxide, potassium butoxide, potassium sec-butoxide,  
 potassium tert-butoxide, potassium pentoxide, potassium  
 tert-pentoxide, potassium phenoxide, potassium salt of  
 acetic acid, potassium hydrogenphthalate, potassium  
 20 hydrogensulfate, monopotassium acetylenedicarboxylic acid,  
 potassium pyrophosphate, potassium dihydrogenphosphate,  
 potassium benzoate, potassium chloride, potassium hexoate  
 (potassium salt hexoic acid), potassium acetate, potassium  
 diphenylphosphide, potassium trimethylsilonalate, potassium  
 25 phthalic acid, P-aminobenzoic acid potassium salt,  
 monopotassium L-aspartic acid, potassium naphthenate,  
 potassium hexacyanoferrate (II), potassium hexacyanoferrate  
 (III), potassium hexacyanocobalt II- ferrate, potassium  
 hexacyanocobalt, potassium sodium ferricyanide, or mixture.

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 11. A composition comprising MMT and a compound  
 selected from the group consisting of  
 triemethoxymethylsilane, dimethylphosphite,  
 ethoxytrimethylsilane, isobutyltriethoxy-silane,  
 35 tetramethylsilane, dimethoxy-methyl-vinyl-silane,  
 methyltriethoxysilane, 3-aminopropyl-triethoxysilane, 3-  
 aminopropyl-trimethoxysilane, vinyltrimethoxysilane,  
 diethoxydi-methylsilane, dimethoxydimethylsilane,  
 vinyltris(2-butyldenamino-oxy)silane, tetraalkyloxysilanes,  
 40 tetramethoxysilane, tetraethoxysilane, tetrapropylloxysilane,  
 tetraisopropylsilane, tetraisobutylsilane, a  
 dialkylphosphites, dimethyl-phosphite, diethylphosphite,  
 dipropylphosphite, dibutylphosphite, di-tert-butylphosphite,  
 trialkylphosphites, trimethylphosphite, triethylphosphite,  
 45 tripropylphosphite, triisopropylphosphite, tributyl-  
 phosphite), dimethylmethylphosphonate, diethylmethyl-phos-  
 phonate, P-pyrophosphate, trimethyl-orthoacetate,  
 trimethylorthovalerate, trimethylorthobutyrate,

trimethylortho-formate, alkyloxymethanes,  
 tetraalkyloxymethanes, tetramethoxymethane,  
 tetraethoxymethane, tetrapropoxymethane, tetraisopropoxy-  
 methane, tetratert-butoxy-methane, potassium pryophosphite,  
 5 trimethylorthoacetate, triethylorthoacetate, trimethylortho-  
 butyrate, triethylortho-butyrate, trimethylorthovalerate,  
 trimethylorthoformate, dimethoxymethane, diethoxyethane,  
 tetramethoxymethane, triethoxymethylmethane, tri-  
 methoxymethylmethane, tetraethoxymethane,  
 10 trimethoxymethylethane, triethoxymethylethane, glacial  
 acetic acid, acetic acide anhydride, (acetyloxy) acid acid,  
 ethyl ester (acetyloxy) acetic acid, aminooxo acetic acid,  
 aminooxo acetic acid hydrazide, ammonium acetate,  
 15 acetoacetic acid, methoxyacetic acid, ethoxyacetic acid,  
 methoxy ethyl ester of acetic acid, methoxy methyl ester of  
 acetic acid, ethoxy methyl ester of acetic acid, ethoxy  
 ethyl ester of acetic acid, propoxy methyl ester of acetic  
 acid, oxoacetic acid, an alkylhydroxyesters of acetic acid,  
 20 methylesterhydro-xyacetic acid, ethylesterhydroxy-acetic  
 acid, propylesterhydro-xyacetic acid, alkyl acetates, methyl  
 ester acetic acid, ethyl arsenate, ethyl arsenite, methyl  
 ester of butanic acid, ethyl ester of butanic acid, 2-  
 hydroxybutanic acid, 3-hydroxybutanic acid, 3-hydroxy-  
 ethylester of butanic acid, 2-hydroxyethylester of butanic  
 25 acid, diphenyl carbonate, dipropyl carbonate, ethylmethyl  
 carbonate, dibutyl carbonate, tetranitromethane,  
 triethylphosphine oxide, triethylphosphine oxide,  
 triethylphosphine, diethyl-phosphinic acid,  
 dimethylphosphinic acid, ethyl diethylphosphinic acid,  
 30 diethylphosphonic chloride, dibutyl ester phosphonic acid,  
 (1,1-dimethylethyl) phosphonic acid, ethenyl diethyl ester  
 phosphoric acid, diethyl ethylphosphonate, ethyl  
 dimethylester phosphonic acid, methyl dimethylester  
 phosphonic acid, methyl monoethylester phosphonic acid,  
 35 methyl monomethylester phosphonic acid, methyl-0,0-  
 dimethylester phosphonothioic acid, diethyl ester phosphoric  
 acid, dimethyl ester phosphoric acid, tributyl phosphate,  
 ethylphosphate, trimethyl ester ester phosphoric acid,  
 triethyl ester ester phosphoric acid, tripropyl phosphate,  
 40 0,0,0,-triethyl ester phosphorothioic acid, diethylester  
 phosphorous acid, dimethylester phosphorous acid, tributyl  
 ester phosphorous acid, triphenyl ester phosphorous acid,  
 0,0,S-tiethyl ester phosphorodithioic acid, 2-methyl-  
 1,2,propanediol, 2-methyl-2-nitro-1,3,-propanediol, 2-  
 45 methyl-2-propyl-1,3,-propanediol, 1-nitrate-1,2,propanediol,  
 1,1',1'',1'''-[methanetetrayltetrakis(oxy)]-tetrakis propane,  
 methyl propyl ether, isopropylmethyl ether, isobutyl methyl  
 ether, ethyl propyl ether, propylmethyl ether, butyl methyl  
 ether, 1,1'-[methylenebis(oxy)]bis[2-methyl-propane, 1-(1-

methylethoxy)-propane, 2,2',2"-[methyldidyne-tris(oxy)]tris  
propane, 1,1',1"-[methyldidyne-tris(oxy)]tris[2-methyl  
propane, 2-methyl-1-nitro propane, 2-methyl-2-nitro propane,  
hydracrylonitrile, 1,1,1-triethoxy-propane, 1,1,3-triethoxy-  
5 propane, 1,1,1-trimethoxy-propane, 1,1,3-trimethoxy-propane,  
1,1,1-trifluoro-3-nitro-propane, 2-pyrrolidinone, phenol,  
and mixture.

12. The composition of claim 11, wherein the compound  
is selected from group consisting of trimethoxymethylsilane,  
10 ethoxytrimethylsilane, isobutyltriethoxysilane, tetra-  
methylsilane, dimethoxy-methyl-vinyl-silane,  
methyltriethoxysilane, 3-aminopropyl-triethoxysilane, 3-  
aminopropyl-trimethoxysilane, vinyltrimethoxysilane,  
15 diethoxydimethylsilane, dimethoxydimethylsilane,  
vinyltris(2-butyldenaminooxy)silane, tetramethoxysilane,  
tetraethoxysilane, tetrapropoxyloxysilane,  
tetraisopropylsilane, tetraisobutylsilane,  
dimethylphosphite, dipropylphosphite, diethylphosphite,  
20 dibutylphosphite, di-tert-butylphosphite, trialkylphosphites  
trimethylphosphite, triethylphosphite,  
triisopropylphosphite, tributylphosphite), dimethyl-  
methylphosphonate, diethylmethylphosphonate, potassium pyro-  
phosphite, trimethylorthoacetate, triethylorthoacetate, tri-  
25 methylorthobutyrate, triethylorthobutyrate, tri-  
methylorthovalerate, trimethylorthoformate, including  
homologues, analogues, isomers, derivatives, and mixture  
thereof.

The composition of claim 2, additionally containing a  
glycol ether or a nitrogen containing compound.